

**EXHIBIT 2**

**REDACTED – IN ITS ENTIRETY**

**CONFIDENTIAL – SUBJECT TO FIRST  
PROTECTIVE  
ORDER IN WC DOCKET NO. 09-135**

## EXHIBIT 3

MEMO

**To** Robert Brigham - Qwest Corporation  
**From** George Wilkerson  
**cc** file  
**Date** 10/20/09  
**Re** Phoenix Forbearance case response - MSI

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On page 34 of the Comptel response, a question is raised about what is meant by the term "representative" in regards to a survey or a sample. A very common type of sample design is known as probability sampling. In probability sampling every member of the population of interest (target population) has a known chance of being selected into the sample. Samples of this type allow us to make statistical projections from the sample to the population as a whole and also allow for the calculation of the margin of error of the estimate (i.e. the level of imprecision due to the use of a sample instead of the entire population). Samples of this type are therefore often referred to as representative samples due to the fact that the sample is used to statistically represent the entire population. References that deal with probability sampling are provided below.

The ability to draw a probability sample depends upon the availability of an appropriate sampling frame. A sampling frame is either a list of the population of interest or a mechanism/procedure for selecting members of the population. For this study, the target population was households within the Phoenix MSA. Since this was a telephone based study, we started with two frames of telephone numbers: one that contained all possible landline telephone numbers and one that contained all possible cell phone numbers. Within each frame telephone numbers were selected randomly and therefore had an equal chance of being selected into the sample. This is equivalent to how lottery numbers are selected using numbered balls selected from a container.

Within each frame we can therefore obtain an estimate of wireless status for a telephone number, and for the household to which it is attached. However, the estimates from both frames need to be combined to determine an overall estimate of wireless households. The combination process accounts for the fact that these two frames overlap (a household can have both landline and cell phone numbers). The overall estimate is therefore produced by computation and application of proper weights as described in great detail in our initial submission.

Categorically, the survey results are not skewed in favor of wireless only households. To ensure equal precision for the landline and cell phone estimates, it was mandatory that Market Strategies conduct about the same number of interviews among sample frames. This is the reason that, as Comptel notes, 48% of the completed interviews were conducted with wireless households. This percentage is prior to the necessary application of the appropriate weights. Once the weights are applied, our estimate of the wireless only households is the 25% that is reported. Thus, while wireless households were surveyed at "a disproportionally

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high rate" in order to secure equally precise estimates for both sample frames, telephone numbers were randomly selected in each frame (as described above) and surveyed to determine the percentage of wireless households. When calibrated with the proper techniques, this procedure yields our statistically valid, unbiased overall estimate. Comptel also mistakenly presumes that this also explains why the Market Strategies estimate is higher than the other estimates referenced in the submission (Nielsen and CDC). Actually, as noted in the submission, all of the numbers are quite similar. Now the Market Strategies estimate of 25% has a confidence interval of  $\pm 5\%$ . This interval of  $\pm 5\%$  means that the estimate of the true level of wireless only households is likely to be in the range of 20% to 30% (that is, 25% plus or minus 5%). So, the Market Strategies confidence interval is quite close to the Nielsen / CDC estimates – and even closer when we recognize that these two estimates also have an associated confidence interval. For example: If the Nielsen precision level is as meager as  $\pm 3\%$ , its confidence interval would be 14.8% to 20.8% -- meaning the Nielsen and Market Strategies intervals overlap, and there would be no statistical difference between the two estimates. And as previously stated, all three estimates paint a similar picture.

Note again that the original submission notes why we might expect the estimate to be increasing over time and as a result the Market Strategies estimate is higher due to this increase. In addition, the economic recession that began last fall has likely accelerated the increase in wireless only households as consumers look for ways to cut expenses.

Cochran, W. (1977), *Sampling Techniques*, New York: Wiley.

Deming, W. (1950), *Some Theory of Sampling*, New York: Dover.

Kish, L. (1965), *Survey Sampling*, New York: Wiley.

CERTIFICATE OF SERVICE

I, Richard Grozier, do hereby certify that I have caused 1) an original and four copies of the foregoing **REPLY COMMENTS OF QWEST CORPORATION** (Redacted) to be filed with the Office of the Secretary in WC Docket No. 09-135; 2) an original of the foregoing **REPLY COMMENTS OF QWEST CORPORATION** (Non-redacted) to be filed with the Office of the Secretary in WC Docket No. 09-135; 3) a searchable electronic copy of the **REPLY COMMENTS** (Non-redacted) to be served via email on Mr. Tim Stelzig at [Tim.Stelzig@fcc.gov](mailto:Tim.Stelzig@fcc.gov) and Ms. Denise Coca at [Denise.Coca@fcc.gov](mailto:Denise.Coca@fcc.gov), both of the Wireline Competition Bureau, Federal Communications Commission; 4) a copy of the **REPLY COMMENTS** (Redacted) to be served via email on the Wireline Competition Bureau at [CPDcopies@fcc.gov](mailto:CPDcopies@fcc.gov); 5) a copy of the **REPLY COMMENTS** (Redacted) to be served via email on the FCC's duplicating contractor, Best Copy and Printing, Inc. at [fcc@bcpiweb.com](mailto:fcc@bcpiweb.com); and 6) a copy of the **REPLY COMMENTS** (Redacted) to be served via First Class United States Mail, postage prepaid, on the parties listed on the attached service list.

/s/Richard Grozier

October 21, 2009

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